

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:

identifying a plurality of nodes which form a communication path between a source and a destination, wherein the plurality of nodes includes pre-arranging one or more internet-connected nodes to transmit a signal from a first node and to a second node; without a buffering delay and/or a route computation delay for at least one or more predetermined time periods;

receiving, at the first node, a signal from the source, wherein the signal is part of a signal stream comprising a plurality of signals which are received at a rate of one signal per time interval;

identifying, based at least in part on a bandwidth between the first node and the second node, a second time interval, wherein the second time interval occurs within the time interval following receipt of the signal; and

establishing a connection between said source and said destination along the pre-arranged one or more internet-connected nodes, at least in part, to enable bi-directional data communication between said source and said destination;

interleaving one or more signals; and

transmitting the signal from the first node to the second node without a buffering delay, wherein the signal is transmitted during the second time interval.

interleaved one or more signals along said connection;

wherein a particular one of the one or more predetermined time periods is determined based at least in part on a transmission link bandwidth of a particular node.

2. (Canceled).

3. (Currently Amended) A system comprising:

a first node and a second node along a communication path between a source and a destination, wherein the first node is configured to receive a signal

from the source, wherein the signal is part of a signal stream comprising a plurality of signals which are received at a rate of one signal per time interval; and

a connection manager configured to identify, based at least in part on a bandwidth between the first node and the second node, a second time interval, wherein the second time interval occurs within the time interval following receipt of the signal

wherein the first node is further configured to transmit the signal to the second node during the second time interval and without a buffering delay.

a virtual dedicated communication path comprising one or more internet connected nodes, wherein the one or more nodes may be pre-arranged, for one or more periods of time, to transmit a signal from a first node to a second node without a buffering delay and/or a route calculation delay, wherein a particular one of said one or more respective periods of time is determined based at least in part on a transmission-link bandwidth of a particular one of the one or more nodes, and wherein said signal comprises one or more multiplexed signals from said source and said destination.

4. (Currently Amended) The system of claim 3, further comprising wherein said virtual dedicated communication path comprises a first unidirectional virtual dedicated circuit and a second unidirectional virtual dedicated circuit, wherein the first unidirectional virtual dedicated circuit and the second unidirectional virtual dedicated circuit are used to form the communication path.

5. (Currently Amended) The system of claim [[4]] 3, wherein the connection manager is further configured to multiplex the signal with one or more additional signals to form a multiplexed signal, and further wherein the multiplexed signal is transmitted from the first node to the second node during the second time interval, at least one of the unidirectional virtual dedicated circuits is active for a period of time.

6. (Currently Amended) A system comprising:

a first Internet connected node and a second Internet connected node, wherein the first Internet connected node is configured to receive a signal from a source, and further wherein the signal is part of a signal stream comprising a plurality of signals which are received by the first Internet connected node at a rate of one signal per time interval; and

a connection manager configured to capable of
identify a communication path between connecting a the source and a destination,
wherein the communication path includes the first Internet connected node and the second
Internet connected node; and

identify, at least in part by designating one or more internet connected nodes for
transmitting a signal from a first node to a second node without a buffering delay and/or a route
calculation delay, at least in part by designating the one or more nodes for transmitting said signal
for one or more periods of time, wherein a particular one or the one or more periods of time is
determined based at least in part on a transmission link bandwidth, a second time interval within
the time interval following receipt of the signal, wherein the first Internet connected node is
configured to transmit the signal to the second Internet connected node during the second time
interval without a route calculation delay, and further wherein the second Internet connected node
is configured to transmit the signal to a third Internet connected node along the communication
path during the second time interval and without the route calculation delay, of a particular one of
the one or more nodes, and wherein said signal comprises one or more multiplexed signals from
said source and said destination.

7. (Currently Amended) The system of claim 6, wherein the first Internet
connected node includes designated one or more nodes comprise a first unidirectional virtual
dedicated circuit and the second Internet connected node includes a second unidirectional
virtual dedicated circuit.

8. (Currently Amended) The system of claim [[7]] 6, wherein the signal is
transmitted by the first Internet connected node and the second Internet connected node
without a buffering delay, at least one of the unidirectional virtual dedicated circuits is
active for a period of time.

9. (Currently Amended) The system of claim 6, wherein said signal further
comprises multiplexed data from a second another source at one or more of the designated
one or more nodes.

10. (Currently Amended) The method of claim 1, and further comprising
interleaving data with the signal, wherein the data is received from a second another source
at the first node, one or more of said prearranged nodes.

11. (Currently Amended) The method of claim 1, wherein the communication path includes said connection comprises a first unidirectional virtual dedicated circuit and a second unidirectional virtual dedicated circuit.

12. (Currently Amended) The system of claim 3, wherein said signal further comprises multiplexed data from a second another source at one or more of the one or more prearranged nodes.